What is claimed is:

1. A thin-walled honeycomb structure comprising:

a circumferential wall,

numerous partition walls disposed inside the circumferential wall, and

numerous cell passages defined by the partition walls;

wherein a circumferential portion of the honeycomb structure is reinforced wholly or in a part within a certain distance from an end surface of the honeycomb structure by a reinforcing material which dissipates or evaporates at a high temperature.

2. A thin-walled honeycomb structure according to claim 1, wherein said reinforcing material is an organic high molecular material.

3. A thin-walled honeycomb structure according to claim 1 or 2, wherein said partition walls have a thickness of 0.13 mm or less.

4. A thin-walled honeycomb structure according to claim 1, wherein a sectional shape of said cell passages is triangular, square, rectangular, hexagonal, or circular.

5. A thin-walled honeycomb structure according to claim 1 or 2, wherein the honeycomb structure is made from at least one porous ceramic material selected from a group of consisting of cordierite, alumina, mullite, silicon nitride, silicon carbide, and zirconia.

6. A method for reinforcing a thin-walled honeycomb structure comprising:

a circumferential wall,

numerous partition walls disposed inside the circumferential wall, and

numerous cell passages defined by the partition walls;

wherein a circumferential portion of the honeycomb structure is coated wholly or in a part within a certain distance from an extremity surface of the honeycomb structure with an organic high molecular material.

7. A method for reinforcing a thin-walled honeycomb structure, comprising:

a circumferential wall,

numerous partition walls disposed inside the circumferential wall, and

numerous cell passages defined by the partition walls; said method comprising steps of:

impregnating and/or coating a circumferential portion of the honeycomb structure with an organic high molecular material wholly or in a part within a certain distance from an extremity surface of the honeycomb structure, and

curing the organic high molecular material.

8. A method for reinforcing a thin-walled honeycomb structure according to claim 6 or 7, wherein an organic high molecular material is filled in cell passages at a vicinity of a circumferential portion including a foremost outer circumferential portion of the honeycomb structure to coat an inner surfaces of said cell passages; or an organic high molecular material is filled into the cell passages, and then the material is cured.

9. A method for reinforcing a thin-walled honeycomb structure according to claim 6, wherein a circumferential portion of the honeycomb structure is wrapped up wholly or in a part, with a tape formed by molding an organic high molecular material, within a certain distance from an extremity surface of the honeycomb structure.

10. A method for reinforcing a thin-walled honeycomb structure according to claim 9, wherein said tape is a pressure-sensitive adhesive.

11. A method for reinforcing a thin-walled honeycomb structure according to claim 6, wherein said organic high molecular material is a photo-curing and photo-reactive material.

12. A method for reinforcing a thin-walled honeycomb structure according to claim 7, wherein said organic high molecular material is a photo-curing and photo-reactive material.

13. A method for reinforcing a thin-walled honeycomb structure according to claim 8, wherein said organic high molecular material is a photo-curing and photo-reactive material.

14. A method for reinforcing a thin-walled honeycomb structure according to claim 9, wherein said organic high molecular material is a photo-curing and photo-reactive material.

15. A method for reinforcing a thin-walled honeycomb structure according to claim 10, wherein said organic high molecular material is a photo-curing and photo-reactive material.

16. A method for reinforcing a thin-walled honeycomb structure

according to claim 6, wherein at least the circumferential portion of the extremity surface of the honeycomb structure is reinforced with an organic high molecular material after injection molding, or after drying before firing but after injection-molding.

17. A method for reinforcing a thin-walled honeycomb structure according to claim 7, wherein at least the circumferential portion of the extremity surface of the honeycomb structure is reinforced with an organic high molecular material after injection molding, or after drying before firing but after injection-molding.

18. A method for reinforcing a thin-walled honeycomb structure according to claim 8, wherein at least the circumferential portion of the extremity surface of the honeycomb structure is reinforced with an organic high molecular material after injection molding, or after drying before firing but after injection-molding.

19. A method for reinforcing a thin-walled honeycomb structure according to claim 9, wherein at least the circumferential portion of the extremity surface of the honeycomb structure is reinforced with an organic high molecular material after injection molding, or after drying before firing but after injection-molding.

20. A method for reinforcing a thin-walled honeycomb structure according to claim 10, wherein at least the circumferential portion of the extremity surface o0f the honeycomb structure is reinforced with an organic high molecular material after injection molding, or after drying before firing but after injection-molding.

21. A method for reinforcing a thin-walled honeycomb structure according to claim 11, wherein at least the circumferential portion of the extremity surface of the honeycomb structure is reinforced with an organic high molecular material after injection molding, or after drying before firing but after injection-molding.